# GREAT SHIPS INITIATIVE (GSI) STANDARD OPERATING PROCEDURE (SOP) DEVIATION FORM

**DATE/TIME:** 9/16/2009 (Form Completed 10/26/2009)
**TEST ID NUMBER: 09-SI-4**
**RDTE FACILITY OR BENCH-SCALE TESTING?** Research, Testing, and Evaluation Facility Test
**GSI RESEARCH TEAM MEMBER NAME/TITLE:** Kelsey R. Prihoda, GSI Assistant QA/QC Officer

| Deviation Number | Description of Deviation (Include SOP Number and Title) | Detailed Description of Impact on Study (If Any) | Description of Corrective Actions Taken (If Needed) |
|---|---|---|---|
| 1 | SOP No: GSI/SOP/BS/RA/RT/6 – Procedure for Assessing Chronic Residual Toxicity of a Ballast Treatment System to *Ceriodaphnia dubia*. ¶5. *C. dubia* were acclimated for 6 hours prior to WET Test set-up. Neonate *C. dubia* must be acclimated for approximately 24 hours at test temperature by transferring <24 hour old neonates from brood boards to 50% culture water (i.e., hard reconstituted water)/50% test water. | There is not an impact on Trial 4 *C. dubia* WET Test as a result of this deviation. This test met the test acceptability criteria for *C. dubia* as set by the US EPA. | No corrective action was taken at the time of the deviation. *C. dubia* were acclimated for approximately 24 hours in preparation for Trials 5-7 WET Testing. |
| 2 | SOP No: GSI/SOP/BS/RA/RT/8 – Procedure for Assessing Chronic Residual Toxicity of a Ballast Water Treatment System to the Green Alga (*Selenastrum capricornutum*; DRAFT). Section "Test Procedure", ¶5. Average initial *S. capricornutum* density was 102,679 cells/mL. Each milliliter of inoculum must contain enough cells to provide an initial cell density of approximately 10,000 cells/mL (± 10%) in the test flasks. | At this time it is not clear what the impact on the Selenastrum WET will be. Corrective action will be taken for future trials. | No corrective action was taken at the time of the deviation. |
| 3 | SOP No: GSI/SOP/BS/RA/RT/8 – Procedure for Assessing Chronic Residual Toxicity of a Ballast | The impact on Trial 4 WET Testing as a result of this deviation is that there is | No corrective action was taken at the time of deviation. It will be |

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| Water Treatment System to the Green Alga Selenastrum capricornutum. DRAFT: Section "QA/QC" ¶4. There was no QA count conducted during the S. capricornutum WET Test. A QA count of the algae cell concentration in at least 30 % of the test chambers must be performed during every 7 d | no measurement of operator/counting bias for the S. capricornutum WET Test. | important to conduct QA counts on S. capricornutum WET Tests in the future in order to determine an acceptable level of bias. |

**GSI Research Team Member Comments:** No additional comments regarding WET Testing SOP Deviations.

Signature: Kelsey R. Prihoda

Digitally signed by Kelsey R. Prihoda
DN: cn=Kelsey R. Prihoda, c=US, o=LSRI, ou=Quality Systems, email=kprihoda@uwsuper.edu
Reason: I attest to the accuracy and integrity of this document
Date: 2009.10.27 12:48:53 -05'00'

**GSI Co-Lead On-Site Investigator Comments:**

Signature: Matthew TenEyck

Digitally signed by Matthew TenEyck
DN: cn=Matthew TenEyck, c=US, o=Lake Superior Research Institute, ou=University of Wisconsin-Superior, email=mteneyck@uwsuper.edu
Date: 2009.10.27 13:38:43 -05'00'

**GSI Principal Investigator Comments:**

Signature: Allegra Cangelosi

Digitally signed by Allegra Cangelosi
DN: cn=Allegra Cangelosi, o=NEMWI, ou, email=acangelo@nemw.org, c=US
Date: 2009.11.06 11:49:21 -05'00'